

# 8.1/8.2 Log Functions.

Graph  $f(x) = 5 \log_2 x + 7$

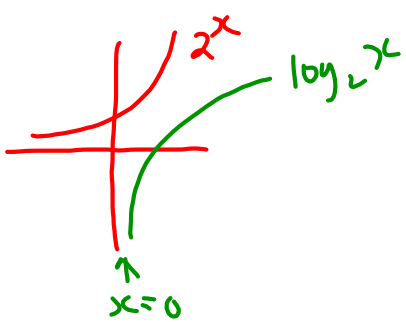
Come up with an accurate table of values.

Step 1 Make a table  $f(x) = 2^x$   
 $\Rightarrow f(x) = \log_2 x$

x	y = 2 <sup>x</sup>
-2	0.25
-1	0.5
0	1
1	2
2	4

x	y = log <sub>2</sub> x
0.25	-2
0.5	-1
1	0
2	1
4	2

Step 2 Apply transformations for all y's multiply by 5 and add 7



x	y
0.25	-2 x 5 + 7 = -3
0.5	-1 x 5 + 7 = 2
1	0 x 5 + 7 = 7
2	1 x 5 + 7 = 12
4	2 x 5 + 7 = 17



pg 451  
 # 1, 2, 14  
 pg 457, 58  
 # 45, 7